



The Secretary of Energy
Washington, DC 20585

May 24, 2004

The Honorable David L. Hobson
Chairman, Subcommittee on Energy
and Water Development
Committee on Appropriations
U. S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

Thank you for your April 29, 2004, letter regarding the consequences associated with an FY 2005 appropriation of \$131 million for the Office of Civilian Radioactive Waste Management. I fully understand and share your concerns about the potential impacts this funding level would cause, and have enclosed responses to your specific questions.

An appropriation level of \$131 million for FY 2005 would have far-reaching implications. Without the necessary funding the Department would have to conduct a Reduction-in-Force (RIF) of approximately 70 percent of the 2,400 person Federal and contractor workforce. In order to have RIFs take effect on October 1, 2004, this would have to be announced to contractor and Federal employees by July 31, 2004. While personnel retained would focus on completing the license application document, the RIF announcement would likely create turmoil in the Program and result in the loss of many technically skilled personnel. Consequently, the license application would be at risk and could result in the postponement of opening the repository in 2010. This would deprive the Nation of a nuclear waste repository for an indefinite period of time.

Congress has aggressively supported finding a solution to the nuclear waste issue beginning with the passage of the Nuclear Waste Policy Act of 1982 through the passage of the siting resolution in 2002. Today, we stand ready to move that process forward by submitting a license application, beginning the licensing process, and staying on track to open Yucca Mountain by 2010. It is vital that we receive our FY 2005 budget request of \$880 million.

If you need additional information, please contact me or Mr. Rick A. Dearborn, Assistant Secretary for Congressional and Intergovernmental Affairs, at (202) 586-5450.

Sincerely,

A handwritten signature in dark ink, reading "Spencer Abraham", is written over the typed name.

Spencer Abraham

Enclosure



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Question #1: What will be the effect on the submission of the license application?

Answer: Approximately 70 percent of the 2,400 person Federal/contractor workforce would have to be eliminated. The remaining workforce would focus on completing the license application document. However, because the Reduction-In-Force (RIF) would likely cause turmoil within the Program and result in the loss of highly skilled technical personnel, the submittal of the license application would be at risk.

Question #2: What will be the effect on planned initiation of repository operations in 2010? If that date will slip, estimate how much repository opening will be delayed.

Answer: The Department would be unable to initiate repository operations in 2010. With a shutdown of most Program activities and the enormous challenge associated with replacing the Federal and contractor workforce should funds become available after such a shutdown, there would be an indefinite delay in opening the repository.

Question #3: What will be the effect of \$131 million in FY2005 funding on ongoing federal and contract work on the repository?

Answer: The current payroll for the more than 2,200 contractors and 231 Federal staff working on the Program is approximately \$400 million in FY 2004. The Department would direct its contractors to begin RIF activities, and would begin a reduction of the Federal workforce. In order to do this, the Department would have to undertake a radical descoping of the contract and begin RIF notifications to Federal staff by no later than July 31, 2004, in order to have RIFs take effect on October 1, 2004. An orderly shutdown would not be possible with such a precipitous reduction (nearly 80 percent) in resources from the previous fiscal year.

Question #4: What will be the effect, on a state-by-state basis, of \$131 million in FY2005 funding on total federal and contractor employment on the repository program?

Answer: The Program has approximately 231 Federal employees (Department of Energy and U.S. Geological Survey) and over 2,200 contractor employees who would be subject to a RIF. Site specific impacts would be:

	<u>Federal employees</u>	<u>Contractor employees</u>
Nevada:	105	1,650
Idaho:		161
California:		159
New Mexico:		96
Washington, DC metropolitan area:	92	92
Colorado:	34	34
Washington:		63
Tennessee:		5
Arizona:		2
Texas:		2
Totals:	231	2,264

Additionally, Nevada and local government employees and their contractors who are supported by the over \$36 million budgeted in FY 2005 for State, local government, and university funding would not receive this funding.

Question #5: Identify all Department sites, including Hanford, Idaho, Savannah River, and any others, which possess high-level radioactive waste that is slated for disposal at Yucca Mountain.

Answer: There are three Department sites in three States that possess high-level radioactive waste slated for disposal at Yucca Mountain.

State	Site
Idaho	Idaho National Engineering and Environmental Laboratory (Idaho Falls)
South Carolina	Savannah River (Aiken)
Washington	Hanford (Richland)

Question #6: Identify all Department sites, and any other Federal sites, which possess spent nuclear fuel that is slated for disposal at Yucca Mountain.

Answer: There are 15 Department or Federal sites in 9 states which possess spent nuclear fuel slated for disposal at Yucca Mountain.

State	Site
Colorado	Fort St. Vrain (Platteville) US Geological Survey (Denver)
Idaho	Idaho National Engineering and Environmental Laboratory (Idaho Falls) Naval Reactors Facility (Idaho Falls) Argonne National Laboratory-West (Idaho Falls)
Illinois	Argonne National Laboratory-East (Argonne)

State	Site
Maryland	National Institute of Standards and Technology (Gaithersburg) Armed Forces Radiobiology Research Institute (Bethesda) U.S. Army Aberdeen Proving Grounds (Aberdeen)
New Mexico	White Sands Missile Range (White Sands) Sandia National Laboratory (Albuquerque)
New York	Brookhaven National Laboratory (Upton)
South Carolina	Savannah River (Aiken)
Tennessee	Oak Ridge National Laboratory (Oak Ridge)
Washington	Hanford (Richland)

Question #7: Identify all non-federal sites, including commercial reactors, commercial storage sites, university reactors, and private research reactors, which possess spent nuclear fuel that is slated for disposal at Yucca Mountain.

Answer: There are 72 commercial reactor sites in 33 States that possess spent nuclear fuel slated for disposal at Yucca Mountain.

State	Commercial Reactor Sites
Alabama	Browns Ferry 1,2,3 (Decatur) Farley 1,2 (Dothan)
Arizona	Palo Verde 1, 2, 3 (Wintersburg)
Arkansas	Arkansas Nuclear 1, 2 (Russellville)
California	Diablo Canyon 1, 2 (Avila Beach) Rancho Seco 1 (lone) San Onofre 1, 2, 3 (San Clemente) Humboldt Bay 3 (Eureka)
Connecticut	Haddam Neck (Haddam) Millestone 1, 2, 3 (Waterford)
Florida	Crystal River 3 (Red Level) St. Lucie 1,2 (Hutchinson Island) Turkey Point 3,4 (Florida City)
Georgia	Hatch 1, 2 (Baxley) Vogtle 1, 2 (Waynesboro)
Illinois	Clinton 1 (Clinton) Quad Cities 1, 2 (Cordova) Braidwood 1, 2 (Braidwood) Zion 1, 2 (Zion) Byron 1, 2 (Byron) Dresden 1, 2, 3 (Morris) LaSalle County 1, 2 (Seneca)
Iowa	Duane Arnold (Palo)
Kansas	Wolf Creek (Burlington)

Louisiana	Waterford 3 (Taft) River Bend 1 (St. Francisville)
Maine	Maine Yankee (Wiscasset)
Maryland	Calvert Cliffs 1,2 (Lusby)
Massachusetts	Pilgrim 1 (Plymouth) Yankee-Rowe (Rowe)
Michigan	Enrico Fermi 2 (Newport) Cook 1, 2 (Bridgeman) Palisades (South Haven) Big Rock Point (Charlevoix)
Minnesota	Monticello (Monticello) Prairie Island 1, 2 (Red Wing)
Mississippi	Grand Gulf (Port Gibson)
Missouri	Callaway 1 (Fulton)
Nebraska	Cooper (Brownville) Fort Calhoun (Calhoun)
New Hampshire	Seabrook (Seabrook)
New Jersey	Oyster Creek (Forked River) Salem 1, 2/Hope Creek 1 (Lower Alloways)
New York	FitzPatrick/Nine Mile Point 1, 2 (Scriba) Indian Point 1, 2, 3 (Buchanan) Ginna (Ontario)
North Carolina	Brunswick 1, 2 (Southport) Harris (New Hill) McGuire 1, 2 (Cornelius)
Ohio	Davis-Besse (Oak Harbor) Perry (Perry)
Oregon	Trojan (Prescott)
Pennsylvania	Susquehanna 1, 2 (Berwick) Limerick 1, 2 (Pottstown) Peach Bottom 2, 3 (Delta) Three Mile Island 1 (Middletown) Beaver Valley 1, 2 (Shippingport)
South Carolina	Robinson 2 (Hartsville) Catawba 1, 2 (Clover) Oconee 1, 2, 3 (Seneca) Summer (Parr)
Tennessee	Sequoyah 1, 2 (Soddy-Daisy) Watts Barr (Spring City)
Texas	Comanche Peak 1, 2 (Glen Rose) South Texas Project 1, 2 (Palacios)
Vermont	Vermont Yankee (Vernon)
Virginia	North Anna 1, 2 (Mineral) Surry 1, 2 (Gravel Neck)

Washington	Columbia Generating Station (Richland)
Wisconsin	Point Beach 1, 2 (Two Creeks) Kewaunee (Carlton) LaCrosse (Genoa)

There are two commercial storage sites in two States with spent nuclear fuel slated for Yucca Mountain.

State	Commercial Storage Sites
Illinois	General Electric (Morris)
Virginia	BWX Technologies, Inc. (Lynchburg)

There are 33 University and Private Research Reactor sites in 22 States with spent nuclear fuel slated for Yucca Mountain.

State	University and Private Research Reactors
Arizona	University of Arizona (Tucson)
California	University of California (Irvine) General Electric (Pleasanton) University of California at Davis (Sacramento) General Atomics (2) (San Diego) Aerotest Research (San Ramon)
Florida	University of Florida (Gainesville)
Idaho	Idaho State University (Pocatello)
Illinois	University of Illinois (2) (Urbana)
Indiana	Purdue University (West Lafayette)
Kansas	Kansas State University (Manhattan)
Maryland	University of Maryland (College Park)
Massachusetts	University of Lowell (Lowell) Massachusetts Institute of Technology (Cambridge) Worcester Polytechnic Institute (Worcester)
Michigan	Dow Chemical Company (Midland)
Missouri	University of Missouri (Columbia) University of Missouri (Rolla)
New Mexico	University of New Mexico (Albuquerque)
New York	State University of New York (Buffalo) Manhattan College (Bronx) Rensselaer Polytechnic Institute (Troy)
North Carolina	North Carolina State University (Raleigh)
Ohio	Ohio State University (Columbus)
Oregon	Oregon State University (Corvallis) Reed College (Portland)
Pennsylvania	Pennsylvania State University (University Park)
Rhode Island	Rhode Island Atomic Energy Commission (Narragansett)
Texas	Texas A&M University (2) (College Station)

State	University and Private Research Reactors
	University of Texas (Austin)
Utah	University of Utah (Salt Lake City)
Washington	Washington State University (Pullman)
Wisconsin	University of Wisconsin (Madison)

Question #8: Identify all reactor sites that are undergoing or have completed decontamination and decommissioning which possess high-level waste or spent nuclear fuel slated for disposal at Yucca Mountain.

Answer : There are 13 commercial and Federal reactor sites in 10 States that are shutdown and are undergoing or have completed decontamination which possess spent nuclear fuel.

State	Reactor Site
California	Rancho Seco 1 (Ione) Humboldt Bay 3 (Eureka) General Atomics (2) (San Diego)
Colorado	Fort St. Vrain
Connecticut	Haddam Neck (Haddam)
Illinois	University of Illinois (2) (Urbana)
Maine	Maine Yankee (Wiscasset)
Maryland	U.S. Army Aberdeen Proving Grounds (Aberdeen)
Massachusetts	Yankee-Rowe (Rowe)
Michigan	Big Rock Point (Charlevoix)
New York	State University of New York (Buffalo) Manhattan College (Bronx)
Oregon	Trojan (Prescott)

In addition, there are two commercial reactor sites in two States that are shutdown that have not begun decontamination.

State	Reactor Site
Illinois	Zion 1,2
Wisconsin	LaCrosse

Question #9: Identify any other domestic sites that possess material, either high-level radioactive waste or spent nuclear fuel, which is destined for disposal at Yucca Mountain.

Answer: Three other domestic sites in three States possess material that may be disposed at Yucca Mountain either high-level radioactive waste or spent nuclear fuel.

State	Site
New Mexico	Los Alamos National Laboratory (Albuquerque)
New York	West Valley Demonstration Project (West Valley)
Texas	Pantex Plant (Amarillo)

Question #10: Identify all foreign reactor sites that possess spent nuclear fuel or high-level waste destined for disposal at Yucca Mountain.

Answer: The Department's 1995 Record of Decision on the Foreign Research Reactor (FRR) Acceptance Program Final Environmental Impact Statement identified 104 reactors in 41 countries that are eligible to participate in the program. A listing of countries and reactors eligible to participate is provided below. The reactors conduct research activities, and are significantly smaller than any commercial reactor. The FRR Acceptance Program was designed to promote the United States' non-proliferation objectives by returning spent fuel containing enriched uranium of U.S. origin from other countries. Although 104 reactors were identified as eligible, the Department does not expect that all reactors will choose to participate in the program. It is estimated that about 19 metric tons of spent fuel from these foreign reactors would require disposal at Yucca Mountain

Question #11: Estimate the legal and financial consequences for the Federal government if it fails to remove high-level radioactive waste from the Department's cleanup sites such as Hanford, Idaho, and Savannah River.

Answer: If the Federal Government fails to remove waste from the Department's cleanup sites, the Department will incur costs of continued storage of the high-level waste until such time as it can be removed. In fact, the cost of storing and handling this waste is estimated to increase by up to \$500 million for each year that removal is delayed.

Question #12: Estimate the legal and financial consequences for the Federal government if it fails to remove spent nuclear fuel from existing Federal storage sites such as the Idaho National Laboratory.

Answer: The Department has an agreement with the State of Idaho regarding removal of spent nuclear fuel from existing Federal storage sites, such as the Idaho National Environmental Engineering Laboratory (INEEL), that was memorialized in a 1996 settlement agreement. This agreement, referred to as the "Batt Agreement," sets out the rights and responsibilities of the State of Idaho and the Departments of Energy and the Navy regarding management or storage of various types of nuclear fuel, including spent nuclear fuel. The Batt agreement provides that if the Federal Government fails to remove all spent fuel from INEEL by 2035, then, subject to the availability of appropriations

FINAL ENVIRONMENTAL IMPACT STATEMENT

on a

Proposed Nuclear Weapons Nonproliferation
Policy Concerning Foreign Research Reactor
Spent Nuclear Fuel

Appendix B Foreign Research Reactor Spent Nuclear Fuel Characteristics and Transportation Casks



United States Department of Energy
Assistant Secretary for Environmental Management
Washington, DC 20585

Table B-3 Foreign Research and Test Reactors that Possess Only Aluminum-Based Fuel Containing HEU and LEU of U.S.-Origin

	Reactor	Country	Power, MW	Fuel Geometry	Initial Enrichments ^a Wt-% ²³⁵ U ₂			Comment (see Note)
					U.S. Origin			
					Enr.1	Enr.2	Enr.3	
HEU Reactors Fully- or Partially-Converted to LEU Fuel								
1	RA-3	Argentina	3	Plates	90	-	-	(1)
2	ASTRA	Austria	10	Plates	93	45	20	
3	IEA-R1	Brazil	2	Plates	93	-	20	
4	NRU	Canada	125	Pin Cluster	93	-	20	
5	DR-3	Denmark	10	Tubes	93	85	20	
6	OSIRIS	France	70	Plates	-	-	20	
7	FRG-1	Germany	5	Plates	93	-	20	
8	NRCRR	Iran	5	Plates	93	-	-	(2)
9	JMTR	Japan	50	Plates	93	45	20	
10	PARR	Pakistan	5	Plates	92	-	-	(2)
11	R2	Sweden	50	Plates	93	-	20	
HEU Reactors that Have Ordered LEU Fuel Elements for Conversion								
12	GRR-1	Greece	5	Plates	93	-	20	(3)
13	HOR	Netherlands	2	Plates	93	-	20	(3)
14	TR-2	Turkey	5	Plates	93	-	20	(3)
HEU Reactors that Can Be Converted to LEU Fuel								
15	RA-6	Argentina	0.5	Plates	90	-	-	
16	HIFAR	Australia	10	Tubes	80	60	20	(3)
17	SAR-GRAZ	Austria	0.01	Plates	90	-	20	
18	MNR	Canada	2	Plates	93	-	20	
19	Slowpoke - Alberta	Canada	0.02	Pin Bundle	93	-	-	
20	Slowpoke - Halifax	Canada	0.02	Pin Bundle	93	-	-	
21	Slowpoke - Montreal	Canada	0.02	Pin Bundle	93	-	-	
22	Slowpoke - Saskatchewan	Canada	0.02	Pin Bundle	93	-	-	
23	Slowpoke - Toronto	Canada	0.02	Pin Bundle	93	-	-	
24	LA REINA	Chile	5	Plates	80	-	-	
25	IAN-R1	Colombia	0.03	Plates	90	-	-	
26	EOLE	France	0.01	Plates	93	-	-	
27	MINERVE	France	0.003	Plates	93	-	-	
28	SCARABEE	France	20	Plates	93	-	-	
29	Strasbourg - Cronenbourg	France	0.1	Plates	90	-	-	
30	Ulyssee - Saclay	France	0.1	Plates	90	-	-	
31	BER-II	Germany	10	Plates	93	-	20	(3)
32	FRJ-2	Germany	23	Tubes	80	-	20	(3)
33	FRM	Germany	4	Plates	93	45	-	
34	IRR-1	Israel	5	Plates	93	-	20	(3)
35	Slowpoke	Jamaica	0.02	Pin Bundle	93	-	-	
36	JMTRC	Japan	0	Plates	93	45	-	
37	JRR-4	Japan	3.5	Plates	93	-	20	(3)
38	KUCA	Japan	0	Plates	93	45	-	
39	KUR	Japan	5	Plates	93	-	20	(3)
40	UTR Kinki	Japan	0	Plates	90	-	-	
41	HFR Petten	Netherlands	45	Plates	93	-	20	(3)
42	LFR	Netherlands	0.03	Plates	93	-	-	
43	RPI	Portugal	1	Plates	93	-	20	
44	SAFARI	S. Africa	20	Plates	93	-	-	(4)

FOREIGN RESEARCH REACTOR SPENT NUCLEAR FUEL
CHARACTERISTICS AND TRANSPORTATION CASKS

	Reactor	Country	Power, MW	Fuel Geometry	Initial Enrichments ^a Wt-% ²³⁵ U			Comment (see Note)
					U.S. Origin			
					Enr.1	Enr.2	Enr.3	
45	R2-0	Sweden	1	Plates	90	-	-	
46	ZPRL	Taiwan	0.01	Plates	93	-	20	
HEU Operating Reactors that Cannot be Converted with Current Technology								
47	BR-2	Belgium	60	Tubes	90-93	-	-	
48	ORPHEE	France	14	Plates	93	-	-	
49	RHF	France	57	Involute Plates	93	-	-	
HEU Operating Reactors Announced to be Shutdown								
50	SILOE	France	35	Plates	93	45	20	
51	SILLETTE	France	0.1	Plates	93	-	-	
52	FMRB	Germany	1	Plates	93	-	-	
53	FRG-2	Germany	15	Plates	90 - 93	-	20	
54	JRR-2	Japan	10	Plates	93	45	-	
55	UTR 300	U. K.	0.3	Plates	90	-	-	
Shutdown Reactors Possessing HEU Fuel								
56	MOATA	Australia	-	Plates	90	-	-	
57	BR-02	Belgium	-	Tubes	90	-	-	
58	NRX	Canada	-	Pin Cluster	93	-	-	
59	PTR	Canada	-	Plates	93	-	-	
60	Slowpoke - Kanata	Canada	-	Pin Bundle	93	-	-	
61	MELUSINE	France	-	Plates	93	-	-	
62	GALILEO	Italy	-	Plates	89	-	-	
63	ISPRA-1	Italy	-	Plates	90	-	-	
64	RANA	Italy	-	Plates	90	-	20	
65	JEN-1	Spain	-	Plates	79	-	20	(5)
66	SAPHIR	Switzerland	-	Plates	93	45	20	
LEU Operating Reactors Possessing Only LEU Fuel								
67	RA-0	Argentina	0.01	Plates	-	-	20	
68	Argonauta	Brazil	0.2	Plates	-	-	20	
69	RSG-GAS30	Indonesia	30	Plates	-	-	20	
70	JRR-3M	Japan	20	Plates	-	-	20	
71	TTR-1	Japan	0.1	Plates	-	-	20	
72	RP-10	Peru	10	Plates	-	-	20	
73	KMRR	S. Korea	30	Pin Cluster	-	-	20	(6)
LEU Shutdown Reactors Possessing Only LEU Fuel								
74	THAR	Taiwan	-	Plates	-	-	20	
75	RU-1	Uruguay	-	Plates	-	-	20	
76	RV-1	Venezuela	-	Plates	-	-	20	

^a Initial enrichments, in weight-% ²³⁵U, of the fuels possessed or anticipated to be possessed by each reactor.
Only fuels containing uranium of U.S.-origin are included.

Note:

- (1) Converted to LEU fuel of Soviet origin.
- (2) Converted to LEU fuel of Chinese origin.
- (3) Use of fuel containing LEU of U.S.-origin is anticipated to begin before 2001.
- (4) Currently uses HEU of South African origin.
- (5) JEN-1 fuel is currently being stored in Dounreay, Scotland.
- (6) The KMRR reactor in South Korea began operation using LEU aluminum-based fuel in January 1995.

Table B-4 Foreign Research and Test Reactors that Possess Only TRIGA Fuel Containing HEU and LEU of U.S.-Origin

	Reactor	Country	Power, MW	Fuel Geometry	Initial Enrichments ^a Wt-% ²³⁵ U, U.S. Origin		
					Enr. 1	Enr. 2	Enr. 3
Reactors Possessing HEU Fuel							
1	Vienna	Austria	0.25	Rods	70	-	20
2	Salazar	Mexico	1	Rods	70	-	20
3	SSR	Romania	14	Rods	93	-	20
4	Ljubljana	Slovenia	0.25	Rods	70	-	20
5	Seoul #2	S. Korea	2	Rods	70	-	20
Reactors Possessing LEU Fuel							
6	Dhaka	Bangladesh	3	Rods	-	-	20
7	Belo Horiz.	Brazil	-	Rods	-	-	20
8	Helsinki	Finland	0.25	Rods	-	-	20
9	Hannover	Germany	-	Rods	-	-	20
10	Heidelberg	Germany	0.25	Rods	-	-	20
11	Mainz	Germany	0.1	Rods	-	-	20
12	Bandung	Indonesia	1	Rods	-	-	20
13	Yogyakarta	Indonesia	0.1	Rods	-	-	20
14	Pavia	Italy	0.25	Rods	-	-	20
15	Rome	Italy	1	Rods	-	-	20
16	Mushashi Inst	Japan	0.1	Rods	-	-	20
17	NSRR-Tokai	Japan	0.3	Rods	-	-	20
18	Rikkyo U.	Japan	0.1	Rods	-	-	20
19	Kuala Lumpur	Malaysia	1	Rods	-	-	20
20	ACPR	Romania	0.5	Rods	-	-	20
21	Seoul #1	S. Korea	0.25	Rods	-	-	20
22	Istanbul	Turkey	0.25	Rods	-	-	20
23	Imp Chem Ind.	U. K.	0.25	Rods	-	-	20
24	TRICO II	Zaire	1	Rods	-	-	20
Shutdown Reactors							
25	TRICO I	Zaire	-	Rods	-	-	20

^a Initial enrichments, in weight-% ²³⁵U, of the fuels possessed by each reactor. Only fuels containing uranium of U.S.-origin are included.

Table B-5 Foreign Research and Test Reactors that Possess Both Aluminum-Based and TRIGA Fuel Containing HEU and LEU of U.S.-Origin.

	Reactor	Country	Power, MW	Fuel Geometry	Initial Enrichments ^a Wt-% ²³⁵ U, U.S. Origin		
					Enr. 1	Enr. 2	Enr. 3
1	PRR-1	Philippines	3	TRIGA Rods	-	-	20
			-	Plates	93	-	20
2	THOR	Taiwan	1	TRIGA Rods	-	-	20
			-	Plates	93	-	20
3	TRR-1	Thailand	2	TRIGA Rods	-	-	20
			-	Plates	90	-	-

^a Initial enrichments, in weight-% ²³⁵U, of the fuels possessed by each reactor. Only fuels containing uranium of U.S.-origin are included.

Note:

All three of these reactors have been converted from plate-type, aluminum-based HEU fuel to TRIGA LEU fuel. The PRR-1 reactor in the Philippines possesses both HEU and LEU cores of plate-type aluminum-based fuel elements.

provided in advance, the Federal parties will pay to the State of Idaho \$60,000 for each day such removal requirement has not been met. Additionally, to the extent that the Department of Energy (DOE) fails to meet substantive obligations or requirements under the agreement, e.g., exceeding shipment limitations set out in the agreement, shipments of DOE spent fuel to INEEL will be suspended until such time that the obligations or requirements are satisfied.

Similarly, the Department has an agreement with the State of Colorado that provides if the Federal Government fails to remove all the spent fuel located at Fort St. Vrain, Colorado, from the State by January 1, 2035, then, subject to the availability of appropriations provided in advance for this purpose, the Department will provide annual funding to the State of Colorado in the amount of \$15,000 for each day after January 1, 2035, until the fuel is removed.

Question #13: Estimate the legal and financial consequences for the Federal government if it continues to be unable to accept spent nuclear fuel from commercial reactors, as is required by the Nuclear Waste Policy Act of 1982, as amended, and by the Department's contracts with the utilities operating those reactors.

Answer: To date, more than 65 claims have been filed by utilities in the Court of Federal Claims for breach of contract to recover monetary damages incurred as a result of the Department's delay. For each year of delay beyond 2010 that the Department is unable to begin accepting spent nuclear fuel from commercial reactors pursuant to the Department's contracts with utilities, the Department estimates that the utilities will incur costs of \$500 million a year to store their spent fuel at utility sites, some portion of which the Department would be liable for. A delay in opening the repository could substantially increase the Department's liability.